

## STATUS OF THE CLAIMS:

The following is the status of the claims of the above-captioned application, as amended.

1. (Currently amended) A composition comprising an enzyme encapsulated in a polymersome comprising a uni-lamellar or multi-lamellar vesicle, wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent; and, wherein the synthetic polymer is a di- or tri-block-co-polymer composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine, and wherein the polymersome remains stable in the presence of a surfactant.
2. (Currently amended) A composition comprising a surfactant and at least one enzyme encapsulated in a polymersome comprising a uni-lamellar or multi-lamellar vesicle, wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent; and wherein the synthetic polymer is a di- or tri-block-co-polymer composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine, wherein the polymersome remains stable in the presence of a surfactant.
3. (Canceled)
4. (Previously presented) The composition of claim 2, wherein the composition is a detergent.
5. (Currently amended) A method comprising the steps of:
  - (a) encapsulating at least one enzyme in a polymersome comprising a uni-lamellar or multi-lamellar vesicle, and
  - (b) adding the vesicle to a surfactant containing composition,wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent; and—wherein the synthetic polymer is a di- or tri-block-co-polymer composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine, and wherein the polymersome is stable in the presence of surfactant.

6. (Currently amended) A method for preventing an enzyme from reacting with other compounds, comprising encapsulating at least one enzyme in a polymersome comprising a uni-lamellar or multi-lamellar vesicle, wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent; and wherein the synthetic polymer is a di- or tri-block-co-polymer composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine, wherein the polymersome is stable in the presents of a surfactant.

7. (Canceled)

8. (Currently amended) A method for improving the stability of an enzyme, comprising encapsulating the enzyme in a polymersome comprising a uni-lamellar or multi-lamellar vesicle, wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent; and wherein the synthetic polymer is a di- or tri-block-co-polymer composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine, wherein the polymersome is stable in the presence of a surfactant.

9. (Canceled)

10. (Currently amended) A composition comprising an enzyme encapsulated in a uni-lamellar or multi-lamellar vesicle comprising at least 50% of a synthetic polymer as a vesicle forming agent, wherein the vesicle comprises a diblock copolymer bilayer structure with triblock copolymers incorporated therein, at least 50% of a synthetic polymer as a vesicle-forming agent, and wherein the diblock copolymer and triblock copolymer are composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine.

11. (Currently amended) A composition comprising a surfactant and at least one enzyme encapsulated in a uni-lamellar or multi-lamellar vesicle comprising at least 50% of a synthetic polymer as a vesicle forming agent, wherein the vesicle comprises a diblock copolymer bilayer structure with triblock copolymers incorporated therein, and wherein the diblock copolymer and triblock copolymer are composed of monomers selected from the

group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine at least 50% of a synthetic polymer as a vesicle forming agent.

12. (Canceled)

13. (Previously presented) The composition of claim 11, wherein the composition is a detergent.

14. (Previously presented) A method comprising the steps of:

(a) encapsulating at least one enzyme in a uni-lamellar or multi-lamellar vesicle comprising at least 50% of a synthetic polymer as a vesicle forming agent, wherein the vesicle comprises a diblock copolymer bilayer structure with triblock copolymers incorporated therein, and wherein the diblock copolymer and triblock copolymer are composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine; and

(b) adding the vesicle to a surfactant containing composition;  
~~wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent.~~

15. (Currently amended) A method for preventing an enzyme from reacting with other compounds, comprising encapsulating the enzyme compound in a uni-lamellar or multi-lamellar vesicle, wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent, wherein the vesicle comprises a diblock copolymer bilayer structure with triblock copolymers incorporated therein, and wherein the diblock copolymer and triblock copolymer are composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine.

16. (Canceled)

17. (Currently amended) A method for improving the stability of an enzyme, comprising encapsulating the enzyme in a uni-lamellar or multi-lamellar vesicle, wherein the vesicle comprises at least 50% of a synthetic polymer as a vesicle forming agent, wherein the vesicle comprises a diblock copolymer bilayer structure with triblock copolymers incorporated therein, and wherein the diblock copolymer and triblock copolymer are

composed of monomers selected from the group consisting of ethyleneoxide, propyleneoxide, ethylethylene, acrylic acid and vinyl amine.

18. (Canceled)

19. (Previously presented) The composition of claim 11, wherein the synthetic polymer is an amphiphilic block-co-polymer; and wherein each domain of the block-co-polymer consists of at least 10 monomers.

20. (Canceled)

21. (Canceled)

22. (Previously presented.) The composition of anyone of claim 19, wherein each domain of the block-co-polymer is a homopolymer.

23. (Previously presented) The composition of claim 11, wherein the uni-lamellar or multi-lamellar vesicle is an aqueous compartment enclosed by a membrane comprising one or more layers, where the layers have an inner hydrophobic domain and an outer hydrophilic domain.

24. (New) A composition in accordance with claim 10, wherein the diblock copolymer comprises domains including 30-50 monomers of the ethyleneoxide or propyleneoxide type, and the triblock copolymers include a central domain having 60-100 monomers of the ethyleneoxide or propyleneoxide type.

25. (New) A composition in accordance with claim 1, wherein the polymersome remains stable in the presence of a surfactant for a period of 1 week.

26. (New) A composition in accordance with claim 1, wherein the polymersome remains stable in the presence of a surfactant for a period of 2 weeks.

27. (New) A composition in accordance with claim 1, wherein the polymersome remains stable in the presence of a surfactant for a period of 3 weeks.

28. (New) A composition in accordance with claim 1, wherein the polymersome remains stable in the presence of a surfactant for a period of 4 weeks.